

**REMARKS**

Reconsideration of the above-identified patent application as amended herein is respectfully requested.

Claims 1-10, 12-20, and 23-24 are presented for examination. Of the foregoing, claims 1 and 24 are independent.

By means of the present Amendment, claims 1, 13, 20 and 24 have been amended. Support for these amendments may be found throughout the specification and in the drawings. No new matter has been added to the application.

In the Office Action dated January 14, 2004, the Examiner rejected claims 13, 20, and 24 under 35 U.S. C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner noted certain defects in these claims.<sup>1</sup> By means of the present Amendment, claims 13, 20, and 24 have been amended so as to remove the defects noted by the Examiner. It is believed that claims 13, 20, and 24 now comply with the requirements of 35 U.S.C. 112, second paragraph, and it is requested that this ground for rejection be withdrawn.

In the Office Action dated January 14, 2004, the Examiner rejected claims 1-10, 12-17, and 24 under 35 U.S.C. 102(b) as being anticipated by US '417. The Examiner also rejected claims 1-10, 12-17, and 24 under 35 U.S.C. 102(b) as being anticipated by US '137. The Examiner also rejected claims 1-10, 12-20, and 23-24 under 35 U.S.C.

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<sup>1</sup> In elucidating the defects in claim 20, the Examiner erroneously referred at times to claim 21 in the Office Action.

103(a) as being unpatentable over either US '390 or DE '962 in view of US '417.<sup>2</sup> The Examiner further rejected claims 1-2, 12-20, and 23-24 under 35 U.S.C. 103(a) as being unpatentable over either US '390 or DE '962 in view of US '137. The Examiner further rejected claims 10, 13, and 15 under 35 U.S.C. 103(a) as being unpatentable over US '137 in view of US '379.

Applicant respectfully traverses each of these grounds for rejection. For the reasons set forth herein, as well as for other reasons, it is believed that the claims, as amended herein, are neither anticipated nor rendered unpatentable by any combination of the prior art of record.

Turning first to the rejection of claims 1-10, 12-17, and 24 as being anticipated by US '417, the Examiner asserted that this reference discloses a joint between two components utilizing a multicomponent adhesive which adhesive can take the form of a matrix 5 and microcapsules 1, as shown in Fig. 1, as well as layers of matrix 5 and microcapsules 1, as shown in Fig 2. The Examiner further asserted that the capsules shown in US '417 are distributed as a layer along an upper surface or upper portion of the matrix as defined at col. 9, lines 18-24 and 60-65. However, these passages as well as Figs. 1 and 2 disclose two separate embodiments of the invention claimed in US '417. According to the embodiment of Fig. 1, microcapsules 1 are dispersed in the binder composition 5, forming a slurry. This slurry is applied as such to a substrate 3, i.e., with

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<sup>2</sup> It is believed that due to a typographical error, the German reference should have been identified by the Examiner as DE 297 03 962 rather than DE 297 03 963. Accordingly, the German reference relied upon by the Examiner is identified as DE '962 herein.

the microcapsules uniformly distributed throughout the binder composition 5. This is clearly illustrated in Fig. 1, and explained at col. 9, lines 12-17 and 57-63, which consistently describe the microcapsules as being dispersed in the binder.

The second embodiment disclosed in US '417 is illustrated in Fig. 2, and is briefly described at col. 9, lines 17-24. According to this second embodiment, the binder 5 is applied to the substrate 3 without any capsules dispersed therein. The microcapsules 1 are then “applied to the surface [of the binder], by sprinkling or other means.” In this second embodiment, “a surface layer of rupturable microcapsules” is formed as illustrated in Fig. 2.

In contrast to both of these embodiments, claims 10 and 24 specify that the matrix (corresponding to binder 5 of US '417) consists of at least two matrix layers, with microcapsules dispersed completely within one of these matrix layers and with no capsules dispersed in the other matrix layer as illustrated in Figs. 3(b), 3(c), and 3(d) of the present application. Such a structure is neither disclosed nor suggested by either of the embodiments described in US '417. As discussed above, the embodiment shown in Fig. 1 has the microcapsules uniformly dispersed within the binder 5. The embodiment of Fig. 2 shows a layer of microcapsules on the surface of the binder 5. Even if one were to assume that some of these microcapsules penetrated into the binder 5 thus forming a matrix layer with microcapsules, claims 10 and 24 require that the microcapsules be “dispersed completely within the matrix,” i.e., completely within one of the matrix layers since no microcapsules are present in the other matrix layer. Thus, claims 10 and 24

require that the microcapsules be completely dispersed within one matrix layer and not be present at all in another matrix layer.

Accordingly, it is submitted that claims 10 and 24, as well as the claims which depend from them, are neither disclosed nor suggested by US '417. US '417 simply does not disclose the structure set forth in claims 10 and 24 and illustrated in Figs. 3(b), 3(c), and 3(d) of the present application. Any attempt to find such structure in US '417 amounts to a hindsight reconstruction of the claimed invention. Accordingly, withdrawal of this ground for rejection is respectfully requested.

Turning next to US '137, the Examiner asserted that Figs. 1-3 of this reference disclose a joint between components utilizing a multicomponent adhesive, which adhesive can take the form of a layer of matrix 29/30 containing microcapsules 28. The Examiner further stated that layers of the matrix 29/30 (such as the uppermost layer and the lowermost layer) do not possess microspheres with the microspheres lying in the central portion of the matrix. The Examiner further asserted that the matrix of US '137 contains at least one element of the reaction adhesive system with the capsules containing at least a second element of the reaction adhesive system.

US '137 discloses a pressure-activated encapsulated sealant system. As illustrated in Figs. 1-3, and as explained at col. 2, lines 31-49, and col. 4, lines 21-74, the system consists of a binder film comprising a lower layer 29 and an upper layer 30, and curing agent particles dispersed therein. The adhesive system further comprises a liquid, curable, sealant material contained within pressure rupturable capsules 28. Capsules 28

are very large in comparison to the thickness of the binder film, as clearly illustrated in Fig. 1, of US 137. Further, as stated as col. 4, lines 21-30, the binder film is of minor dimension in thickness with respect to the size of the capsules, so that the capsules are only "partially embedded" in the binder film. See also col. 2, lines 46-49.

In contrast, claims 10 and 24 of the present invention require that the microcapsules be "dispersed completely within the matrix," i.e., within the matrix layer which contains the capsules. Furthermore, claims 10 and 24 require that the microcapsules release their contents completely within the matrix under external influence.

It is therefore submitted that claims 10 and 24, as well as the claims which depend from them specify structure which is neither disclosed nor suggested by US '137. Accordingly, withdrawal of the rejection of these claims as being anticipated by US '137 is respectfully requested.

The remaining grounds for rejection under 35 U.S.C. 103(a) all rely on either US '417 or US '137 as disclosing one or more of the claimed limitations. However, as demonstrated above, these limitations are not in fact disclosed or suggested by either US '417 or US '137. Accordingly, withdrawal of the rejections under U.S.C. 103(a) is respectfully requested.

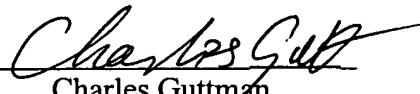
In light of the foregoing amendments and arguments, the application is now believed to be in proper form for allowance of all claims and a notice to that effect is earnestly solicited.

The undersigned attorney requests that the Examiner contact him at the telephone number indicated below if it would help expedite prosecution of this application.

Respectfully submitted,  
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